

As with TXU, many companies use the convergence model to expand overseas. TXU's acquisition of electric and gas distribution companies in Australia and the UK provide entry into these markets. The acquisition becomes the platform for upstream growth in unregulated markets. Incremental acquisitions strengthen competitive energy businesses (upstream), regulated energy-delivery businesses (downstream), and portfolio management to keep the two in balance.

Other convergence leaders employ their own versions of this expansion model. Reliant entered Europe through the \$2 billion UNA generating asset purchase in Holland. Dominion Resources, by contrast, has chosen to sell international assets, focussing on the domestic MAIN to Maine region.

Other convergence plays have chosen contracts over assets as a means for new market entry, at least until pricing becomes more certain domestically and abroad.

Duke Energy, for one, is no longer willing to buy upstream assets to enter a market following a 20% price decline in the UK earlier this year. Content with its current international generating portfolio, Duke will now enter new foreign markets only through contracts to trade electricity. While still willing to buy and construct pipelines necessary to downstream profitability, contracts are a less risky approach to achieve the upstream growth Duke seeks.

## NEED FOR FUNDING SPURS ASSET SALES

More recently, electric companies have found that multi-billion dollar deals are harder to execute with lower stock prices. As their debt capacities reach their limits, they need to maintain their credit quality to assure regulators and to ensure good access to capital. This has contributed to a spate of asset sales.

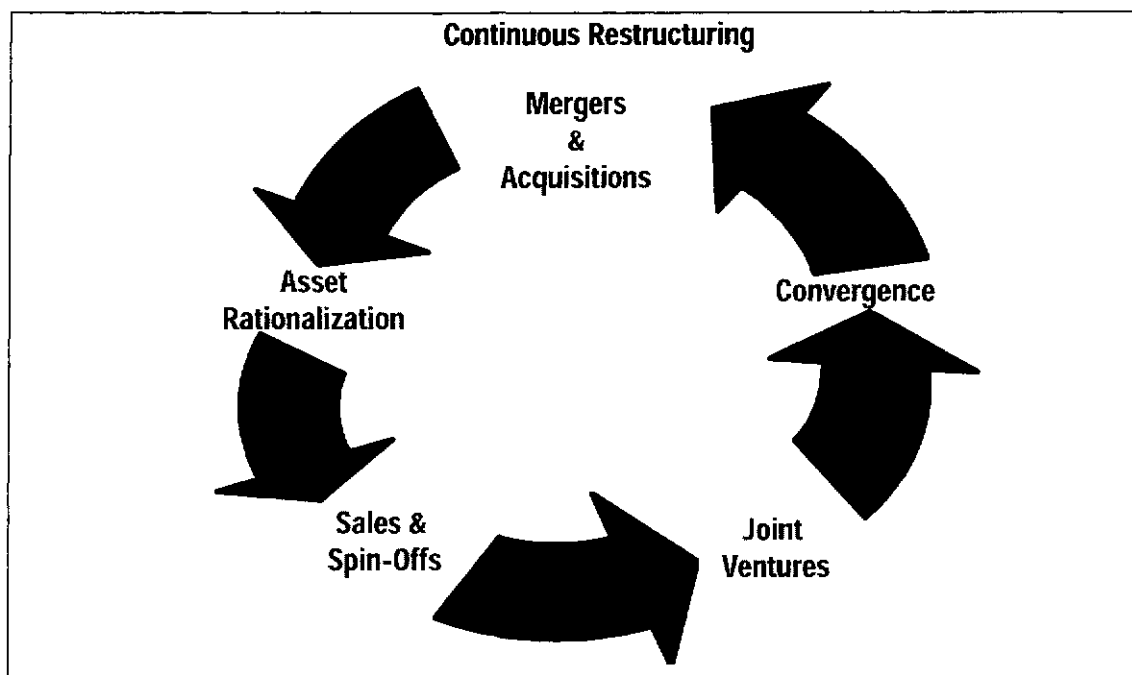
In addition to financial considerations, shifts in corporate strategy have also motivated large-scale asset sales. For example, Duke Capital Corporation sold Panhandle Eastern Pipe Line Company to CMS Energy Corporation after two years of ownership. Reliant Energy, Inc. decided to sell much of the Noram Energy gas assets it acquired three years ago, then subsequently decided to keep them.

Given the demand for new gas-fired merchant plants, companies such as Duke Energy have also constructed a number of merchant generating plants, which they will either keep or sell, depending on the most economic opportunity. Demand for these plants has given Duke and others with construction capability a substantial boost in cash flow available for debt service.

This trend has a number of rating implications. We now give less benefit to the "halo effect" (the credit benefit that a subsidiary might derive from its parent) than we used to in the ratings of subsidiaries because it is harder to assess whether the parent's support - or indeed even the parent - will be there in the long term. Furthermore, even if a subsidiary is not subsequently spun off, as the parents become more financially leveraged, they may be less willing or less able to provide financial support. When the parent does decide to spin-off a subsidiary, there is also event risk in who will buy it and how it will be financed.

The number of assets being put up for sale has created some buying opportunities too good to pass up. But while many companies bid for such assets, quite a few are constrained from financing them because their stock prices are low and their debt levels are high. Consequently, companies such as Dominion Resources decide to sell some non-core assets of their own to raise cash for the acquisition. Thus the "spin-off" cycle is continued.

The divestiture of generating assets has provided, and will likely continue to provide, attractive opportunities for both domestic and foreign corporations to grow through acquisitions. Likewise, newly restructured utilities engaged solely in the transmission and delivery of electricity in the US have attracted, and will likely continue to attract, some interest from foreign companies.



### **Foreign Investment in US Electric and Water Utilities Pressure Ratings With Leverage**

From a fixed-income investor's perspective, most of the acquisitions of US utilities by non-US companies to date have been, or are likely to be, funded through issuance of large amounts of debt. This tends to increase the leverage of the acquiring entities, and can pressure the financial flexibility not only of the acquirer but of the target as well, depending on the extent to which the parent has to rely on dividends from the acquired company to help service the acquisition debt. As a result, the bond ratings of both the acquirer and the target could be pressured.

Since 1998, there has been a steady flow of transactions whereby large foreign electricity supply and water companies (mostly from Western Europe) have pursued growth through acquisitions of electric and water utilities in the United States. An integral part of the acquiring companies' strategies has been a strong desire to enhance earnings and create more stable and predictable cash flow, as well as to use the newly acquired companies as a springboard for seizing additional opportunities in the changing US utility industry. Large international corporations have been particularly interested in the US electric and water sectors because of the fragmented state of these industries, which offers consolidation opportunities. Also, the pressing need, in some instances, for system upgrades, have represented perceived opportunities for the interested companies to achieve relatively low-risk earnings growth. The stable US economy and generally supportive political and regulatory environments have further added to the attraction.

Eight announcements have been made between December 1998 and June 2000. On a combined basis, the eight deals had a market value of approximately \$31.6 billion, with the largest by far being the \$12.8 billion investment that Scottish Power made to acquire PacifiCorp. Influenced by the size of the Scottish Power/PacifiCorp transaction, 69% of the aggregate market value of the transactions announced during this time frame were in the electric sector, while the balance related to water utility deals. Five of the deals, aggregating approximately 80% of the \$31.6 billion investment value, have been completed, while three deals are still pending.

Out of these transactions, the security ratings of Scottish Power, Kelda Group, and Thames Water were downgraded as a result of their largely debt-financed investments, whereas the security ratings of National Grid and Vivendi were confirmed with negative and stable outlooks, respectively. The ratings of target companies PacifiCorp and the former New England Electric System (now National Grid USA) were unchanged as a result of their change in ownership. Ratings for United States Filter Corp. were withdrawn since the debt was retired as part of the transaction. Of the remaining transactions included in our chart on the following page, Suez Lyonnaise Des Eaux was eventually assigned a Prime-1 short-term issuer rating, although it did not have a public debt rating at the time its announcement to increase its investment in United Water Resources was made. PowerGen UK and LG&E Energy Corp. are still on review for possible downgrade.

Aquarion Company, United Water Resources, Bangor Hydro-Electric and Company, and Emera, Inc. remain unrated by Moody's. Emera, Inc. (formerly NS Power Holdings Inc.), the holding company for Nova Scotia Power, represents the initial foray by a Canadian-based utility to acquire a US-based utility. Assuming this transaction is successful, we expect that Emera will look to use this investment as a platform for other US investments, especially in the Northeast.

Looking forward, we expect that French water companies, which are by far the largest water companies worldwide, will continue to look to the US for additional opportunities to provide global water and wastewater services to industrial clients.

At the same time, we anticipate that UK-based electric and water companies will continue to experience pressure on their earnings due to the harsh domestic regulatory framework, compounding concerns about the current disfavor held by equity investors. Indeed, regulators for the UK water and electric utility sectors have been imposing tariff reductions, which are likely to challenge even the more efficient players in those sectors. Therefore, the UK-based companies are likely to find investment opportunities in the US to be more lucrative, especially if they can succeed in exporting their cost-cutting capabilities.

Foreign Investments in the United States				
Announced Date	Acquiring Company	Target Company	Investment (U.S. \$)	Status
12/98	ScottishPower (A1)a	PacificCorp (A2)b	\$12.8 bil.	Completed
12/98	National Grid Group (A1)c	New England Electric System (P-1)b	\$3.2 bil.	Completed
3/99	Vivendi S.A. (Baa2)b	US Filter Corp. f	\$7.9 bil.	Completed
6/99	Kelda Group plc (A2)a	Aquarion Company g	\$444 mil.	Completed
8/99	Suez Lyonnaise des Eaux (P-1)d	United Water Resources, Inc. g	\$1 bil.	Completed
11/99	Thames Water plc (A2)a	Etown Corporation (A3)b	\$607 mil.	Pending
2/00	PowerGen UK plc (A2)e	LG&E Energy Corp. (A3)e	\$5.4 bil.	Pending
6/00	Emera Inc. (formerly NS Power Holdings Inc.) g	Bangor Hydro-Electric Co. g	\$206 mil.	Pending
9/00	National Grid Group plc (A1)e	Niagara Mohawk Holdings, Inc. g parent to Niagara Mohawk Power Corp. (Baa2)b	\$3 bil.	Pending
Footnotes: a: rating downgraded. b: rating confirmed. c: rating confirmed, but outlook left negative. d: rating assigned subsequent to the acquisition announcement. e: rating on review for possible downgrade. f: rating withdrawn due to debt retirement following the acquisition by Vivendi. g: currently unrated.				

### **"Peer Group" a Misnomer, Vast Strategic Differences Require Diverse Financial Parameters.**

As a result of all of the changes outlined above, the US electric utility industry has moved from a relatively homogeneous sector of vertically integrated companies into a loosely affiliated group of companies that happen to operate in one, two, three, or perhaps all aspects of producing and selling electricity.

Included in the back of this industry outlook is a set of "peer group" average financial ratios parced by rating category and by loosely defined business concentrations, including transmission and distribution companies, vertically integrated utilities, and utilities/diversified holding companies. However, one must keep in mind that — as stated in our introduction — the industry is today no longer one peer group of 121 utilities, but rather 121 peer groups of one. Direct comparisons are very difficult.

Since each company's strategy is unique, the comparison of financial ratios — long the quantitative framework for analysis — has become less and less meaningful in and of itself. Instead, these ratios and rating category averages are only the starting point in an increasingly sophisticated analysis that not only considers each entity's stand-alone risk profile, but also how these risk profiles interact with each other under today's increasingly common holding company structure.

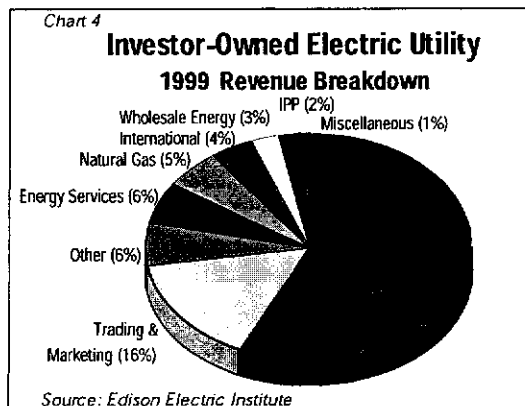
## NEW STRUCTURES CALL FOR NEW APPROACH

As noted earlier, today's increasingly complex holding companies encompass operating companies of widely differing business risks: unregulated generating asset subsidiaries, energy trading subsidiaries, regulated transmission and distribution utilities, local gas distribution utilities, and energy service companies. These are the most common examples, but the list goes on into various types of telecommunications ventures, water companies, or even investments that bear no relation either to energy or to regulation.

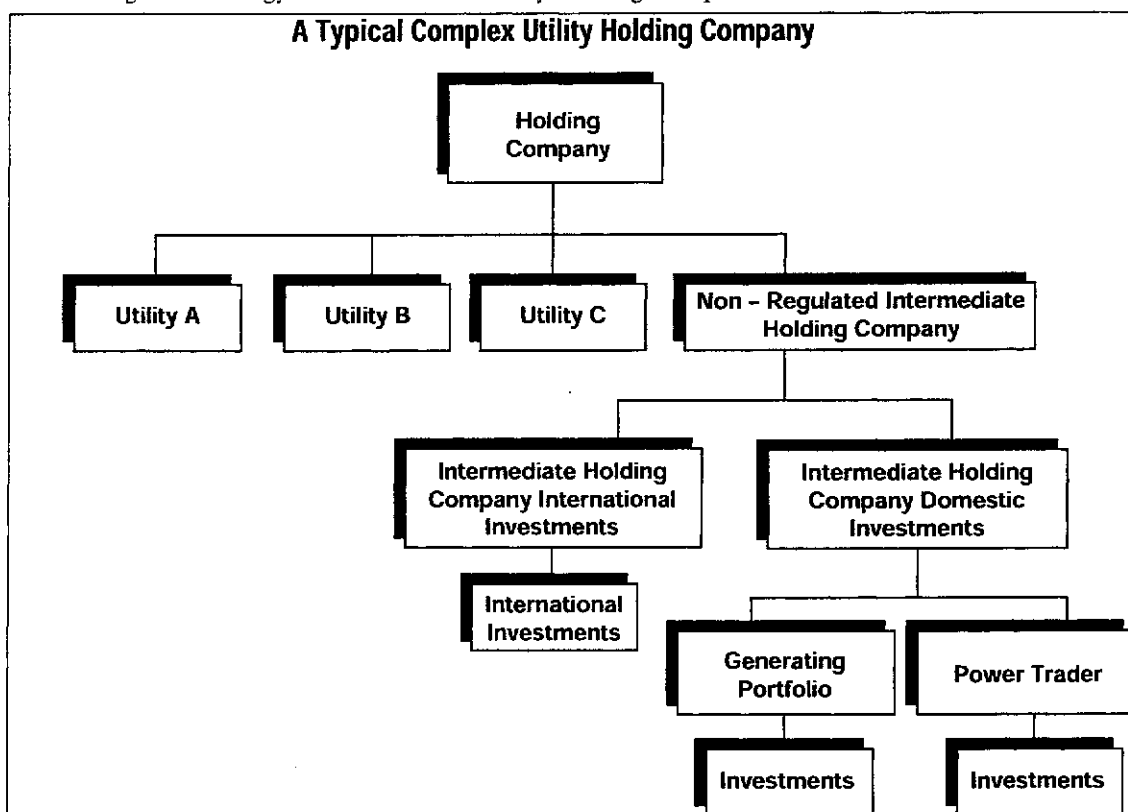
In many such organizations, the transmission and distribution company or vertically integrated entity represents the "anchor rating." During the transition, it will likely continue to provide the lion's share of cash flow, as well as stability, given its continued regulation. The genco or other rated unregulated subsidiaries, on the other hand, may represent the growth vehicle(s).

The unregulated subsidiaries, where rated, tend to have lower ratings than the electric utility given their less-certain cash flows, their exposure to fluctuations in market demand and pricing, and their sometimes unproven business models.

The risks of all these diverse entities are factored into the holding company rating. The following pie chart illustrates revenues contributed to the parent by distinct lines of non-utility businesses within the electric energy industry.



Moody's combines a number of analytic approaches to determine the ratings of such complex structures. The analytic process can be distilled into two primary approaches: the "building block" approach - which is more of a "bottom-up" analysis - and the "enterprise" approach - which might be regarded as a "top-down" analysis. Both of these approaches are outlined below and are described more fully in Moody's April, 2000 Rating Methodology entitled "Electric Utility Holding Companies."



## On- or Off-Balance-Sheet Holding Company Leverage Raises Risk, Lowers Ratings

Traditionally, the amount of debt at the parent, or supported by the parent to finance unregulated investment, resulted in a rating for the holding company that was a single notch lower than the operating company unsecured ratings. However, as the amount of debt held at the holding company level grows, so does the likelihood that this increase in leverage will result in an even lower rating for the holding company. It may also depress ratings at the regulated operating subsidiary on which the holding company relies for its cash flows for debt service, depending on the extent to which the utility is "ring-fenced" - or protected from the excessive upstreaming of dividends for such purposes.

Over the last few years, large acquisitions have caused leverage at some companies to rise dramatically - a phenomenon we call "leaping" leverage. Several large-scale acquisitions completed just over the last 12 months have been financed with debt issued by a holding company ("dual cash mergers"). Dominion Resources (senior unsecured Baa1) completed its acquisition of Consolidated Natural Gas (senior unsecured A2) in January, Scana Corporation (senior unsecured A3) funded its \$900 million acquisition of Public Service of North Carolina (senior unsecured A2) in February, and Carolina Power and Light (CP&L) (senior secured A2) expects to close its \$8 billion acquisition of Florida Progress Corp (unrated) this fall. In the Dominion and Scana cases, the parent rating remains one notch lower than the risk weighted average of the subsidiaries due to credit strength observed in the parent cash flow analysis. However, final ratings have yet to be determined for CP&L Energy, the new holding company formed to complete the merger of CP&L and Florida Progress Corp.

The table below is a representative, but not exhaustive, list of other holding companies that have experienced large increases in their amount of indebtedness over the last five years.

Company	Total assets	1999	1998	1997	1996	1995
AES Corporation	20,880,000	70.22	68.39	66.96	70.25	65.75
American Electric Power Company	21,488,000	61.97	60.57	55.62	50.71	52.45
Central and South West Corporation	14,162,000	60.57	57.29	56.62	55.97	58.77
Consolidated Edison, Inc.	15,531,476	48.89	40.52	43.03	41.80	-
Dominion Resources, Inc.	12,747,000	59.22	51.07	58.49	50.47	48.63
Duke Energy Corporation	33,409,000	44.34	42.73	44.26	43.71	41.49
Edison International*	36,229,000	71.08	62.69	62.10	52.00	56.79
FirstEnergy Corp.	18,224,047	56.77	58.07	60.03	54.20	-
GPU, Inc.	21,718,082	67.02	55.30	60.30	51.51	45.75
Niagara Mohawk Power Corporation	12,445,603	63.25	64.65	52.75	53.12	54.45
PG&E Corporation*	29,715,000	59.12	57.60	53.77	48.48	-
Public Service Enterprise Group Inc.	19,015,000	59.42	49.93	53.25	49.45	50.00
Reliant Energy, Incorporated	26,220,935	67.03	65.89	59.09	53.82	45.14
Southern Company	38,396,000	56.26	51.77	51.58	47.09	50.12
TXU Corp.	40,741,000	67.89	66.50	55.78	56.77	58.88
Unicom Corporation*	23,406,033	58.61	65.06	52.86	49.69	51.83

\* Includes Issuance of Securitization Bonds  
Source: Mettler

In considering the unprecedented growth in the parent or unregulated debt burden, Moody's also includes the growing use of off-balance-sheet debt and its counterpart, non-recourse debt, which results in a slower, more insidious rise in total indebtedness - a phenomena we call "creeping leverage." (See Moody's April 2000 Special Comment, "Creeping Leverage.")

Moody's automatically adds several types of off-balance-sheet debt onto a balance sheet in the course of rating assessment, while others require more analysis. For example, operating leases and minority interest are incorporated into a parent's rating through a modified net present value approach and proportionate consolidation, respectively.

We consider other off-balance-sheet investments on a case-by-case basis to determine the extent to which they should be dimensioned in a parent's rating. We understand that each company's decision whether to support an off-balance-sheet investment will be made on the basis of economics rather than on the basis of the legal obligation. Today's brightest investment idea easily becomes tomorrow's albatross, and strategies change on a regular basis. For that reason, not only do we not necessarily attribute off-balance-sheet investments to the parent's balance sheet, but we are less likely to attribute a "halo effect" of implied support to give the rating of the investment a lift.

Further skewing the effects of off-balance-sheet investments is the fact that they are often made in businesses which carry more risk than that reflected in the parent's rating, which until recently has typically been dominated by regulated, power-related businesses. As non-regulated businesses grow in importance to company strategy, we expect to see a growing number of these investments financed on balance sheet and therefore factored directly into corporate ratings.

### **Joint Ventures May Move Risk. But Not Remove It**

In the past year, we have seen a proliferation of joint ventures, partnerships, and IPOs designed to remove risk from the balance sheet, and in several cases, to create a new entity with a highly valued stock price. For example, Entergy's joint venture with Koch Industries (to be rated this fall) will remove certain power trading assets from Entergy's balance sheet. Duke Energy Field Services (Baa2 rating), the joint venture between Duke and Phillips Petroleum (Baa2), removed field services assets from both companies' balance sheets. In each case, the newly created entity will grow its business independently while sending dividends to the sponsoring entities.

In these particular examples, Moody's does not factor risk from these entities directly into the sponsor ratings (other than consideration of the potential loss of cash flow resulting from the removal of assets from the corporation). We do not impute the joint venture's risks to the sponsor for several reasons, including: 1) the non-recourse nature of the debt; 2) the sponsor's willingness and ability to walk away from the investment should it become troubled; 3) the joint ventures' own access to capital markets through debt issues or IPOs; and 4) the benefit to the sponsors of cash from these entities gained from dividends and from proceeds from securities issues. These factors, rather than the fact that the ownership interest falls below 50%, enables Moody's to rate the investment separately from the sponsor.

At the same time, as demonstrated by the long-term ratings of Duke Energy Field Services' joint ventures, long-term ratings tend to be lower than the long-term ratings of their sponsors as a result of the same absence of explicit or implied support.

Sponsor	Rating	Joint Venture	Rating
Duke Capital Phillips Petroleum	A3 Baa2	Duke Energy Field Service	Baa2
Entergy Corporation Koch Industries	not rated P-1	Entergy-Koch, LP	to be rated

The ratings impact of other partnerships is less clear. We have seen a spate of highly structured joint ventures seeking the same off-balance-sheet treatment from a ratings perspective. For example, TXU's (Baa3) new joint venture, Pinnacle One (Ba1), with private equity investors removes telecommunications investments from TXU's balance sheet from an accounting perspective. The notes issued by Pinnacle are paid off with the proceeds of either an equity issuance by Pinnacle or TXU, or a mandatory convertible preference stock of TXU held in trust to support the noteholders.

In this type of structure, Moody's focuses upon the feasibility, timeliness, and mechanics of the equity conversion feature. These elements, in addition to the structure of the transaction, determined the extent to which the TXU rating was shielded from risks in the unregulated telecom investment.

Other companies that have employed this particular structure include CMS Energy (senior unsecured Ba3), Noble Affiliates (senior unsecured Baa2), and Enron Corporation (senior unsecured Baa1). In most cases, the partnership has received a rating one notch below the senior unsecured rating of the sponsoring company. Each transaction is, however, structured differently and Moody's considers off-balance sheet-treatment accordingly. Some are listed below.

Sponsor	Rating	Joint Venture	Rating
TXU	Baa3	Pinnacle One	Ba1
CMS Energy Noble Affiliates	Ba3 Baa2	Atlantic Methanol	B1/Baa3
Enron Corporation	Baa1	Martin Water Capital	Baa1

## IPOS SEPARATE GROWTH BUSINESSES FROM CORE

Low stock prices combined with ample growth opportunities in risky merchant arenas create an environment in which shareholder and bondholder interests have diverged. Companies are restructuring to meet shareholder demand for eight to ten and ten to twelve percent growth while incurring extra bondholder risk through development of merchant opportunities. Regulators support the separation of unregulated from regulated utilities in order to protect the electric customer from risky investment.

Spins and IPOs to separate regulated from unregulated businesses can be structured to help or hurt bondholders. It is a question of what the IPO or spin is designed to accomplish. While Western Resources' secured first mortgage bond ratings plummeted four notches to Ba1 from A3 after the announced spin owing to negative changes in the capital structure, Southern Company's subsidiary credit profiles stabilized as a result of the partial removal of the risky merchant generation and marketing businesses from the family.

In another pending deal, all of the long-term ratings for Reliant Energy (Baa1) and its subsidiaries are on review for potential downgrade following the announcement that the company is spinning off its unregulated businesses. Not only will certain ratings deteriorate to reflect structural subordination from the creation of a new holding company, but regulated businesses will also be saddled with \$9 billion of existing leverage while the spun unregulated businesses will begin with only \$2 billion. In addition, cash flow from the spun business will no longer be available to service the large debt burden left with the regulated business. Without offsetting financial strength, business risk of the spun affiliate will likely receive lower ratings than its former affiliate.

The chart below details four IPOs. Companies often begin with a 19.9% spin of unregulated businesses in order to effect a tax free exchange. In most cases, this will be followed by the 80.1% balance. Other recently announced IPO's include Orion and up to 50% of CMS Energy's oil and gas operations.

Parent	Spin Vehicle	Date Announced	Timing of 19% Spin	Timing of 100% Spin
Western Resources	Western Capital	Mar-2000	N/A	By year end 2000
The Southern Company	Southern Energy	Apr-2000	September 2000	within 12 months
Reliant Energy	Unirego	Jul-2000	4th Q '00/1st Q '01	earliest summer '01
Xcel Energy	NRG Energy	Mar-2000	May 2000	Unknown

## Conclusion

### THE ART OF ANALYSIS IN THE NEW POWER SECTOR

As the power sector changes, develops, reforms, and changes some more, analytic techniques must evolve to deal with new issues and corporate structures. Long held analytic points of view must be continually reviewed and revised to adapt to changing business and financial risk profiles resulting from sector restructuring. It is therefore more important than ever to use sound, well thought out, sophisticated and evolved analytic approaches when concluding ratings. Financial matrices that attempt to define rating levels exclude some of the most important information about a company; its strategic direction coupled with management capacity to effectively execute in a quickly evolving environment full of unknowns. While a handy scorecard describing attributes defining each rating category would make investors lives easy, the complexity of the power sector makes such a tool misleading. Only rigorous analysis of each individual situation will adequately uncover the real credit quality of companies operating in the ever changing power sector.



## Appendix I

### 1999 Actual Data For the Electric Industry (\$mil.)

#### Vertically Integrated Utilities Peer Group

Sr. Debt Rating	Company	Revenue	Net Income	Operating Margin	EBIT/ Interest	FFO/ Interest	FFO % Capex	RCF % TD	Total Cap. (in \$mil.)	Tot. Debt % Tot. Cap	Pref Stk% Tot. Cap	Common % Tot. Cap
Aa1	Wisconsin Public Service Corporation	719	104	17.27	4.53	6.28	107.72	18.58	926	37.78	5.53	56.69
	AVERAGE OF RATING GROUP	719	104	17.27	4.53	6.28	107.72	18.58	926	37.78	5.53	56.69
Aa2	Indianapolis Power & Light Company	835	143	21.99	6.53	7.26	248.38	18.29	1,517	44.64	3.9	51.46
Aa2	Madison Gas and Electric Company	274	24	11.88	3.68	5.88	116.62	23.38	350	46.95	0	53.05
Aa2	Southern Indiana Gas & Electric Company	376	46	16.88	4.55	6.23	170.28	22.53	689	47.08	2.88	50.03
Aa2	Tampa Electric Company	1,459	145	16	4.04	4.66	93.18	13	2,373	44.09	0	55.91
Aa2	Wisconsin Electric Power Company	2,016	212	21.2	3.73	4.85	120.88	13.2	3,884	50.8	0.78	48.42
Aa2	Wisconsin Power and Light Company	753	68	20.59	3.62	4.92	127.29	17.79	1,256	47.55	4.77	47.68
	AVERAGE OF RATING GROUP	952	106	18.09	4.36	5.63	146.11	18.03	1,675	46.85	2.06	51.09
Aa3	AmerenUE	2,527	340	17.54	5.62	6.57	249.19	17.45	4,483	42.25	3.46	54.29
Aa3	Florida Power & Light Company	6,057	576	12.32	6.58	10.2	174.1	39.08	7,317	31.41	3.09	65.5
Aa3	Florida Power Corporation	2,633	266	14.25	4.23	6.08	176.01	25.11	3,627	47.11	0.92	51.97
Aa3	Mississippi Power Company	633	55	18.92	4.28	4.99	147.11	13.08	868	47.15	7.7	45.15
	AVERAGE OF RATING GROUP	2,962	309	15.76	5.18	6.96	186.6	23.68	4,074	41.98	3.79	54.23
A1	Alabama Power Company	3,385	400	26.42	3.65	4.41	103.34	12.42	7,042	48.12	9.44	42.45
A1	Baltimore Gas and Electric Company	3,028	315	23.26	3.35	4.85	185.96	20.87	5,404	48.27	8.14	43.58
A1	Georgia Power Company	4,457	541	28.72	4.57	5.04	142.94	16.83	8,223	42.33	9.78	47.89
A1	Gulf Power Company	674	54	17.68	4.44	5.46	171.54	13.77	934	45.23	9.55	45.22
A1	Kansas City Power & Light Company	897	78	16.04	2.82	2.54	60.99	0.34	2,107	49.99	8.97	41.03
A1	Kentucky Utilities Co.	937	104	14.51	5.05	6.12	109.92	22.72	1,223	44.66	3.27	52.07
A1	Monongahela Power Company	673	92	17.68	4.61	5.65	197.53	12.94	1,250	47.78	5.92	46.3
A1	Oklahoma Gas & Electric Company	1,287	139	20.95	5.87	6.29	240.17	19.87	1,592	44.16	0	55.84
A1	Potomac Edison Company (The)	753	101	18.02	3.85	8.2	256.78	14.99	1,286	45.52	0	54.48
A1	Public Service Company of Oklahoma	749	62	13.32	3.38	4.43	131.52	15.19	1,023	45.32	7.85	46.84
A1	Savannah Electric and Power Company	252	23	19.9	4.19	4.78	151.3	10.95	397	45.88	10.08	44.04
A1	South Carolina Electric & Gas Company	1,467	182	19.29	3.68	4.33	154.19	14.36	3,187	45.87	5.24	48.89
A1	Southwestern Electric Power Company	965	88	15.29	3.06	4.28	179.55	15.11	1,466	46.56	7.83	45.62
A1	Southwestern Public Service Company	926	103	16.72	3.81	4.25	153.71	12.68	1,645	47.64	6.08	46.28
A1	West Penn Power Company	1,354	209	19.59	3.86	3.94	233.96	11.46	1,095	92.73	0	7.27
	AVERAGE OF RATING GROUP	1,454	166	19.16	4.01	4.84	164.89	14.3	2,525	49.34	6.14	44.52
A2	Carolina Power & Light Company	3,358	379	25.03	4.4	6.08	126.87	19.84	6,866	49.43	0.86	49.7
A2	Central Hudson Gas & Electric Corporation	522	49	13.59	3.29	4.56	229.6	15.96	897	46.86	6.24	46.9
A2	Central Illinois Light Company	553	16	7.96	2.37	5.18	176.42	20.41	715	44.03	9.25	46.73
A2	Cleco Utility Group, Inc.	788	55	14.65	3.79	4.75	62.1	11.4	1,086	58.31	1.28	40.41



## Appendix I

## 1999 Actual Data For the Electric Industry (\$mil.)

## Vertically Integrated Utilities Peer Group

Sr. Debt Rating	Company	Revenue	Net Income	Operating Margin	EBIT/Interest	FFO/Interest	FFO % Capex	RCF % TD	Total Cap. (in \$mil.)	Tot. Debt % Tot. Cap	Pref Stk % Tot. Cap	Common % Tot. Cap
A2	Dayton Power & Light Company	1,273	192	29.76	4.75	6.03	499.75	34.44	2,105	37.26	1.09	61.65
A2	Empire District Electric Company (The)	242	19	17.58	2.73	3.82	84.14	10.66	580	59.63	0	40.37
A2	IES Utilities Inc.	801	66	20.17	3.11	4.8	183.67	16.1	1,256	53.53	1.46	45.01
A2	Idaho Power Company	658	92	26.2	2.78	3.99	171.13	11.84	1,764	52.73	6	41.27
A2	Northern Indiana Public Service Company	1,752	214	17.1	5.68	6.72	223.14	16.53	2,318	50.68	5.83	43.49
A2	Portland General Electric Company	1,378	126	13.79	3.97	4.83	151.72	18.12	2,070	48.26	1.45	50.29
A2	Virginia Electric and Power Company	4,591	448	21.93	3.62	4.92	148.03	15.33	8,691	49.52	7.41	43.07
A2	West Texas Utilities Company	440	46	15.56	2.73	4.17	160.88	15.84	583	55.77	0.43	43.8
	<b>AVERAGE OF RATING GROUP</b>	<b>1,361</b>	<b>142</b>	<b>18.61</b>	<b>3.6</b>	<b>4.89</b>	<b>184.8</b>	<b>17.21</b>	<b>2,411</b>	<b>50.5</b>	<b>3.44</b>	<b>46.06</b>
A3	Appalachian Power Company	1,651	118	14.61	2.42	3.02	123.15	7.64	2,978	60.06	1.3	38.63
A3	Central Power and Light Company	1,482	179	19.88	3.35	4.22	181.52	12.77	3,271	54.32	4.77	40.91
A3	Cincinnati Gas & Electric Company (The)	2,551	233	18.8	4.81	5.74	243.5	14.77	3,181	47.19	0.65	52.16
A3	Columbus Southern Power Company	1,230	148	18.11	4.1	4.26	212.4	16	1,856	52.28	1.35	46.37
A3	Detroit Edison Company	4,047	434	23.1	3.22	4.93	178.53	20.95	7,543	51.9	0	48.1
A3	LG&E Energy Corp.	2,707	236	16.43	3.37	4.8	131.25	15.8	3,547	60.91	6.91	32.17
A3	MidAmerican Energy Company	1,791	269	24.94	5.81	5.51	170.31	28.39	2,314	46.43	7.85	45.71
A3	Ohio Power Company	2,039	211	14.16	5.08	6.24	226.02	16.36	2,778	49.71	0.93	49.36
A3	PPL Electric Utilities Corporation	3,952	444	18.95	3.5	4.36	239.33	13	5,389	69.51	8.44	24.05
A3	Public Service Company of Colorado	2,227	204	15.96	2.98	3.89	77.32	11.46	4,166	53.07	4.66	42.27
A3	Public Service Electric and Gas Company	5,890	644	27.13	4.13	4.21	259.08	11.78	9,631	53.96	7.09	38.95
A3	Rochester Gas & Electric Corporation	1,090	182	21.33	5.16	4.55	160.77	16.12	1,657	50.09	4.35	45.57
A3	TXU Electric Company	6,207	769	20.12	3.79	4.87	270.23	29.63	13,145	41.95	7.3	50.75
	<b>AVERAGE OF RATING GROUP</b>	<b>2,836</b>	<b>313</b>	<b>19.5</b>	<b>3.98</b>	<b>4.66</b>	<b>190.26</b>	<b>16.51</b>	<b>4,727</b>	<b>53.16</b>	<b>4.12</b>	<b>42.69</b>
Baa1	Arizona Public Service Company	2,293	267	16.96	3.92	5.18	192.08	20.84	4,134	52.02	0	47.98
Baa1	Commonwealth Edison Company	6,767	627	17.83	2.86	1.11	4.51	-4.21	13,539	58.18	2.65	39.17
Baa1	Hawaiian Electric Company, Inc.	1,050	75	11.7	3.53	4.62	182.41	15.74	1,693	44.47	7.93	47.6
Baa1	Illinois Power Company	1,903	122	11.44	1.83	2.2	90.37	4.8	3,744	65.97	6.39	27.65
Baa1	Indiana Michigan Power Company	1,394	28	7.79	1.57	1.47	22.78	-5.31	2,590	60.23	2.87	36.91
Baa1	Kentucky Power Company	374	25	14.62	2.35	2.93	125.87	6.42	682	59.47	0	40.53
Baa1	Ohio Edison Company	2,687	286	17.61	3.06	4.84	339.9	15.14	5,921	49.94	5.74	44.32
Baa1	PECO Energy Company	5,437	607	25.92	3.56	3.41	194.26	11.92	8,354	74.93	3.84	21.22
Baa1	Pennsylvania Power Co.	329	8	9.74	2.34	4.75	363.48	-3.64	572	55.61	9.47	34.92
Baa1	Puget Sound Energy, Inc.	2,044	151	14.05	2.46	3.09	101.56	7.23	4,040	60.28	5.59	34.13
	<b>AVERAGE OF RATING GROUP</b>	<b>2,428</b>	<b>220</b>	<b>14.76</b>	<b>2.75</b>	<b>3.36</b>	<b>159.72</b>	<b>6.89</b>	<b>4,527</b>	<b>58.11</b>	<b>4.45</b>	<b>37.44</b>

## Appendix I

### 1999 Actual Data For the Electric Industry (\$mil.)

#### Vertically Integrated Utilities Peer Group

Sr. Debt Rating	Company	Revenue	Net Income	Operating Margin	EBIT/ Interest	FFO/ Interest	FFO % Capex	RCF % TD	Total Cap. (in \$mil.)	Tot. Debt % Tot. Cap	Pref Stk% Tot. Cap	Common % Tot. Cap
Baa2	Entergy Arkansas, Inc.	1,542	58	12.67	2.13	3.54	98.23	11.74	2,418	49.08	7.29	43.63
Baa2	Entergy Louisiana, Inc.	1,807	182	23.26	3.79	3.9	245.78	8.87	2,642	48.84	7.78	43.39
Baa2	Entergy Mississippi, Inc.	833	38	10.58	2.27	2.93	79.24	8.09	941	49.38	5.36	45.26
Baa2	Entergy New Orleans, Inc.	508	18	8.38	2.9	4.42	108.44	13.27	317	53.27	6.23	40.5
	<b>AVERAGE OF RATING GROUP</b>	<b>1,172</b>	<b>74</b>	<b>13.72</b>	<b>2.77</b>	<b>3.7</b>	<b>132.92</b>	<b>10.49</b>	<b>1,580</b>	<b>50.14</b>	<b>6.66</b>	<b>43.2</b>
Baa3	Cleveland Electric Illuminating Company	1,865	161	21.17	2.39	3.2	381.63	7.72	4,348	69.61	8.15	22.23
Baa3	Consumers Energy Company	3,874	313	17.42	3.73	5.31	175.9	20.38	4,842	49.46	9.07	41.47
Baa3	El Paso Electric Company	570	32	27.58	1.87	3.18	261.98	21.8	1,260	66.56	0	33.44
Baa3	Entergy Gulf States, Inc.	2,127	108	15.09	2.2	2.86	136.01	8.72	3,475	48.45	9.24	42.31
Baa3	Public Service Company of New Mexico	1,158	79	10.37	2.05	3.76	204.37	16.33	1,901	51.99	1.35	46.66
Baa3	System Energy Resources, Inc.	620	82	42.49	1.78	2.98	1,014.22	18.75	2,052	56.56	0	43.44
Baa3	Texas-New Mexico Power Company	578	39	13.95	2.35	3.48	261.49	17.69	754	58.35	0.22	41.43
Baa3	Toledo Edison Company	921	134	23.23	2.74	4.28	238.4	12	1,872	59.32	11.22	29.47
	<b>AVERAGE OF RATING GROUP</b>	<b>1,484</b>	<b>118</b>	<b>21.41</b>	<b>2.39</b>	<b>3.63</b>	<b>334.25</b>	<b>15.42</b>	<b>2,563</b>	<b>57.54</b>	<b>4.91</b>	<b>37.56</b>
Ba1	Green Mountain Power Corporation	251	3	3.17	1.28	2.41	111.73	6.27	211	46.36	6.05	47.59
	<b>AVERAGE OF RATING GROUP</b>	<b>251</b>	<b>3</b>	<b>3.17</b>	<b>1.28</b>	<b>2.41</b>	<b>111.73</b>	<b>6.27</b>	<b>211</b>	<b>46.36</b>	<b>6.05</b>	<b>47.59</b>
Ba2	Public Service Company of New Hampshire	1,161	84	10.74	3.73	6.25	480.42	34.27	1,414	45.49	1.77	52.74
Ba2	Tucson Electric Power Company	804	69	21.89	1.43	2.45	196.79	6.9	2,371	88.61	0	11.39
	<b>AVERAGE OF RATING GROUP</b>	<b>982</b>	<b>77</b>	<b>18.31</b>	<b>2.58</b>	<b>4.35</b>	<b>338.61</b>	<b>20.59</b>	<b>1,892</b>	<b>67.05</b>	<b>0.88</b>	<b>32.07</b>
	<b>TOTAL AVERAGES</b>	<b>1,792</b>	<b>182</b>	<b>17.83</b>	<b>3.56</b>	<b>4.6</b>	<b>190.62</b>	<b>14.98</b>	<b>3,048</b>	<b>51.93</b>	<b>4.45</b>	<b>43.62</b>
	<b>TOTAL MEDIANS</b>	<b>1,280</b>	<b>124</b>	<b>17.56</b>	<b>3.62</b>	<b>4.64</b>	<b>171.33</b>	<b>15.12</b>	<b>2,087</b>	<b>49.45</b>	<b>4.77</b>	<b>45.18</b>

## Appendix I

## 1999 Actual Data For the Electric Industry (\$mil.)

Transmission & Distribution Companies Peer Group												
Sr. Debt Rating	Company	Revenue	Net Income	Operating Margin	EBIT/ Interest	FFO/ Interest	FFO % Capex	RCF % TD	Total Cap. (in \$mil.)	Tot. Debt % Tot. Cap	Pref Stk% Tot. Cap	Common % Tot. Cap
Aa2	AmerenCIPS	928	50	10.21	2.94	4.47	155.78	8.21	1,276	51.85	6.27	41.88
	AVERAGE OF RATING GROUP	928	50	10.21	2.94	4.47	155.78	8.21	1,276	51.85	6.27	41.88
Aa3	San Diego Gas & Electric Company	2,207	193	12.73	3.14	3.7	134.29	15.03	2,902	51.14	3.58	45.28
	AVERAGE OF RATING GROUP	2,207	193	12.73	3.14	3.7	134.29	15.03	2,902	51.14	3.58	45.28
A1	Boston Edison Company	1,547	154	15.27	3.35	4.89	268.55	-6.83	2,287	64.57	4.04	31.39
A1	Consolidated Edison Company of New York, Inc.	6,956	698	14.4	4.33	4.83	183.7	-2.13	9,657	51.92	2.58	45.5
A1	Orange and Rockland Utilities, Inc.	617	14	4.09	0.88	1.98	80.84	-7.74	734	54.74	0	45.26
A1	Pacific Gas & Electric Company	9,228	763	21.6	3.36	3.73	136.83	14.5	14,320	56.65	5.1	38.25
A1	Potomac Electric Power Company	2,476	238	23.25	2.82	3.51	255.87	9.52	5,370	60.24	4.19	35.57
A1	Southern California Edison Company	7,522	484	11.28	2.68	2.92	94.4	3.74	10,022	64.9	3.84	31.26
	AVERAGE OF RATING GROUP	4,724	392	14.98	2.9	3.64	170.03	1.84	7,065	58.83	3.29	37.87
A2	Cambridge Electric Light Company	112	0	3.98	0.59	4.27	875.28	38.76	129	21.12	0	78.88
A2	Delmarva Power & Light Co.	2,236	138	14.06	3.99	4.51	314.16	18.89	1,872	55.35	8.53	36.12
A2	Jersey Central Power & Light Company	2,018	163	18.12	3.81	5.64	315.91	8.33	2,829	43.58	7.45	48.97
A2	Metropolitan Edison Company	903	95	23.62	4.39	0.85	-10.74	-58.91	1,148	47.63	8.71	43.67
A2	Pennsylvania Electric Company	922	152	20.78	5.29	-9.07	-465.52	-172.46	1,039	46.01	9.62	44.37
	AVERAGE OF RATING GROUP	1,238	109	16.11	3.62	1.24	205.82	-33.08	1,404	42.74	6.86	50.4
A3	Atlantic City Electric Company	1,077	62	15.97	2.84	1.97	119.51	-0.34	1,872	57.1	6.69	36.21
A3	Central Maine Power Company	954	65	13.77	2.46	3.66	206.53	54.35	737	24.44	4.95	70.62
A3	Duquesne Light Company	1,159	147	22.42	2.91	3.87	341.77	6.97	2,975	65.44	7.71	26.84
A3	New York State Electric and Gas Corporation	2,094	221	28.19	4.61	3.21	407.89	5.27	2,012	68.31	0.5	31.18
A3	Sierra Pacific Power Company	764	66	17	3.2	3.64	96.37	6.61	1,610	52.04	6.12	41.85
A3	United Illuminating Company	680	88	13.76	3.76	3.18	266.73	9.31	1,069	52.45	4.68	42.87
	AVERAGE OF RATING GROUP	1,121	108	18.52	3.3	3.25	239.8	13.69	1,713	53.3	5.11	41.6
Baa2	Niagara Mohawk Power Corporation	3,827	-15	13.89	1.1	2.21	200.99	8.62	8,943	63.25	5.61	31.14
	AVERAGE OF RATING GROUP	3,827	-15	13.89	1.1	2.21	200.99	8.62	8,943	63.25	5.61	31.14

## Appendix I

### 1999 Actual Data For the Electric Industry (\$mil.)

#### Transmission & Distribution Companies Peer Group

Sr. Debt Rating	Company	Revenue	Net Income	Operating Margin	EBIT/ Interest	FFO/ Interest	FFO % Capex	RCF % TD	Total Cap. (in \$mil.)	Tot. Debt % Tot. Cap	Pref Stk% Tot. Cap	Common % Tot. Cap
Baa3	Connecticut Light and Power Company	2,453	-14	7.12	2.14	1.96	64.28	7.43	2,852	56.62	6.87	36.51
Baa3	Western Massachusetts Electric Company	414	22	14.63	2.2	1.94	71.66	5.05	720	61.96	5.07	32.97
	AVERAGE OF RATING GROUP	1,434	4	10.88	2.17	1.95	67.97	6.23	1,786	59.29	5.97	34.74
	TOTAL AVERAGES	2,322	172	15.46	3.04	2.81	187.05	-1.26	3,472	53.24	5.1	41.66
	TOTAL MEDIANS	1,353	116	14.51	3.04	3.57	169.74	7.21	1,942	55.04	5.09	40.05

#### Utility Diversified Holding Companies Peer Group

Aa3	Duke Energy Corporation	21,742	827	8.26	2.99	6.07	51.3	23.49	21,347	44.34	7.89	47.77
Aa3	Northern States Power Company (Minnesota)	2,869	219	11.97	2.08	4.61	175.98	13.02	7,410	61.37	4.12	34.51
Aa3	Otter Tail Power Company	465	43	14.5	4.56	5.37	197.34	21.2	462	39.51	7.26	53.23
	AVERAGE OF RATING GROUP	8,359	363	11.58	3.21	5.35	141.54	19.24	9,740	48.41	6.42	45.17
A1	Black Hills Corporation	792	37	7.82	4	5.34	64.45	17.17	476	54.52	0	45.48
A1	North Western Corporation	3,004	38	2.65	1.5	2.48	241.07	5.71	1,586	52.52	28.55	18.93
	AVERAGE OF RATING GROUP	1,898	37	5.23	2.75	3.91	152.76	11.44	1,031	53.52	14.28	32.21
A2	PacifiCorp	3,970	65	18.9	2.17	3.07	124.5	7.65	8,976	51.55	6.21	42.24
	AVERAGE OF RATING GROUP	3,970	65	18.9	2.17	3.07	124.5	7.65	8,976	51.55	6.21	42.24
Baa1	Avista Corp.	7,905	5	0.4	0.48	2.02	75.86	3.67	1,520	47.25	26.86	25.89
Baa1	Minnesota Power, Inc.	1,132	66	19.94	3.79	2.81	107.82	3.97	1,731	47.29	6.15	46.56
Baa1	Montana Power Company	1,342	147	17.27	5.39	13.49	188.26	65.86	1,809	37.45	6.78	55.77
Baa1	Reliant Energy, Incorporated	15,303	1,665	8.11	2.43	3.46	106.62	6.79	18,234	67.03	3.92	29.05
	AVERAGE OF RATING GROUP	6,420	471	11.43	3.02	5.44	119.64	20.07	5,823	49.75	10.93	39.32
Baa3	UtiliCorp United Inc.	18,622	160	1.76	1.77	2.95	279.35	10.02	4,446	56.09	7.87	36.04
	AVERAGE OF RATING GROUP	18,622	160	1.76	1.77	2.95	279.35	10.02	4,446	56.09	7.87	36.04
Ba1	Western Resources, Inc.	2,036	0	13.48	0.93	2.48	139.28	7.81	6,014	61.53	4.07	34.4
	AVERAGE OF RATING GROUP	2,036	0	13.48	0.93	2.48	139.28	7.81	6,014	61.53	4.07	34.4
	TOTAL AVERAGES	6,598	273	10.42	2.67	4.51	145.99	15.53	6,168	51.7	9.14	39.16
	TOTAL MEDIANS	2,937	66	10.11	2.3	3.27	131.89	8.92	3,128	52.04	6.5	39.14

*To order reprints of this report (100 copies minimum), please call 800.811.6980 toll free in the USA.  
Outside the US, please call 1.212.553.1658.*

Report Number: 60619